



## ServSensor EXP 8

# Connect additional intelligent sensors to the ServSensor V4E.



Customer Support Information Order toll-free in the U.S.: Call 877-877-BBOX (outside U.S. call 724-746-5500) • FREE technical support 24 hours a day, 7 days a week: Call 724-746-5500 or fax 724-746-0746 • Mailing address: Black Box Corporation, 1000 Park Drive, Lawrence, PA 15055-1018 • Web site: www.blackbox.com • E-mail: info@blackbox.com

## Trademarks Used in this Manual

Black Box and the Double Diamond logo are registered trademarks of BB Technologies, Inc.

Any other trademarks mentioned in this manual are acknowledged to be the property of the trademark owners.

We're here to help! If you have any questions about your application or our products, contact Black Box Tech Support at 724-746-5500 or go to blackbox.com and click on "Talk to Black Box."
You'll be live with one of our technical experts in less than 20 seconds.

## Federal Communications Commission and Industry Canada Radio Frequency Interference Statements

This equipment generates, uses, and can radiate radio-frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.

## Instrucciones de Seguridad

## (Normas Oficiales Mexicanas Electrical Safety Statement)

- 1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
- 2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
- 3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
- 4. Todas las instrucciones de operación y uso deben ser seguidas.
- 5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.
- 6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
- 7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
- 8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
- 9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
- 10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
- 11. El aparato eléctrico deberá ser connectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.
- 12. Precaución debe ser tomada de tal manera que la tierra fisica y la polarización del equipo no sea eliminada.
- 13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
- 14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
- 15. En caso de existir, una antena externa deberá ser localizada lejos de las lineas de energia.
- 16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
- 17. Cuidado debe ser tomado de tal manera que objectos liquidos no sean derramados sobre la cubierta u orificios de ventilación.
- 18. Servicio por personal calificado deberá ser provisto cuando:
  - A: El cable de poder o el contacto ha sido dañado; u
  - B: Objectos han caído o líquido ha sido derramado dentro del aparato; o
  - C: El aparato ha sido expuesto a la lluvia; o
  - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
  - E: El aparato ha sido tirado o su cubierta ha sido dañada.

## Table of Contents

1.	Specifications	6
2.	Overview	7 7
	2.2 What's Included	7
	2.3 Hardware Description	8
	2.3.1 Front Panel	8
	2.3.2 Back Panel	9
3.	Installation	10
	3.1 Connecting to the Base Unit	10
	3.2 Setting Up a Sensor (Standard Configuration)	11
	3.3 Setting Up a Sensor (Daisychained Configuration)	14
4.	Notifications	18
	4.1 Adding a Notification	18
	4.2 SNMP Trap	19

## 1. Specifications

Components: Manufactured using highly integrated, low-power surface-mount technology to ensure long-term reliability

Data Transfer Rate: 115.2 kbps

**Expandability/Expansion modules:** Daisychain multiple expansion modules, including EME1X8 and EME1DC16, uses standard RJ-45 connections and CAT5 LAN cable, connect up to 600 intelligent sensors

Maximum Cable Length: 1000 ft. (300 m)

Mean Time Between Failures (MTBF): 400,000 hours

Network Interface: (1) standard 10/100BASE-T Ethernet RJ-45 port

**Connectors:** Input: (8) RJ-45 for connecting sensors, (1) RJ-45 expansion module input (E-in), (1) RJ-45 expansion module output (E-out)

Indicators: (3) LEDs: (1) Power, (1) Network Connectivity, (1) Sensor Online/Threshold Status

Temperature Tolerance: Operating: -31 to 131° F (-35°C to +55° C)

Humidity: 20 to 80%, noncondensing

**Power:** Output: 7.0–9 VDC, 3 amps, configurable output signals (0–5 VDC) on any of the 8 RJ-45 sensor ports Consumption: Typical 6.15 watts, 0.82 amps

Size: 1.8"H x 8.5"W x 5.4"D (4.6 x 21.6 x 13.7 cm)

Weight: 2.4 lb. (1.1 kg)

## 2. Overview

## 2.1 Introduction

Use the ServSensor EXP8 (EME1X8) expansion module to extend the ServSensor V4E (EME134A) capabilities by connecting additional intelligent sensors.

## 2.2 What's Included

Your ServSensor EXP 8 package should contain the following items. If anything is missing or damaged, contact Black Box Technical Support at 724-746-5500 or info@blackbox.com.

- ServSensor EXP 8
- (1) CD-ROM
- (1) 7.0 –9 V, 2.5 A power supply
- (2) Brackets for rackmounting
- (1) 5-ft. (1.5-m) straight cable

## 2.3 Hardware Description

## 2.3.1 Front Panel

Figure 2-1 shows the ServSensor EXP 8's front panel, and Table 2-1 describes its components.



Figure 2-1. Front panel.

#### Table 2-1. Front panel components.

Number Component			Description			
1	Power LED	)	Lights continuously when the ServSensor EXP 8 is powered on.			
			If the LED is flashing, there is a problem with the CPU.			
2	Link LED		Lights when a network connection is present.			
3	RJ-45 por	ts	Expansion In/Expansion Out ports. These ports are named E-in and E-out. The E-in port connects to your ServSensor V4E base unit via a CAT5e straight-through cable. The E-out port is used to daisychain additional expansion modules via a CAT5e straight-through cable.			
4 Status/On		line LEDs 1–8	LEDs numbered 1–8 indicate the connectivity status of the sensors connected to each port. These LEDs also indicate system status during various operations.			
Table 2-2. St			tus/Online LED functions.			
Function De		Description				
Upgrade in progress		The red LEDs will move from left to right to indicate activity, and the green LEDs indicate overall progress of the upgrade. When all the red lights are off and all the green lights on, the upgrade/recovery process is complete.				
Unit is operating in safe mode		Used when the ServSensor EXP 8 loads the operating system (OS) with a minim drivers. If your device enters safe mode after rebooting, contact Black Box Techn Support at 724-746-5500 or info@blackbox.com.				
Unit is in recovery mode		The ServSensor EXP 8 may enter recovery mode if a firmware upgrade is incomplete The unit displays a continuously lit row of red LEDs during recovery mode. If your der enters recovery mode, contact Black Box Technical Support at 724-746-5500 or info@blackbox.com.				

## 2.3.2 Back Panel



Figure 2-2 shows the ServSensor EXP 8's back panel, and Table 2-3 describes its components.

Figure 2-2. Back panel.

Table 2-3. Back panel components.

Number	Component	Description
5	(8) RJ-45 ports	The sensor ports, numbered 1–8, are used to connect intelligent sensors to the ServSensor EXP 8.
6	(1) barrel connector	This is a 7.5-VDC plug. Use a 7.0–9-V, 2.5-A power supply (included).

## 3. Installation

## 3.1 Connecting to the Base Unit

To connect the ServSensor EXP 8 to the ServSensor V4E, follow the steps listed below.

1. Connect the cable to your chosen port on the ServSensor. See Figure 3-1.





2. Connect the other end to the "E-in" port on the expansion module. See Figure 3-2.





NOTE: Make sure that the 7.5-volt power supply is connected.

The expansion modules can be mounted in either a standard configuration or a daisychained configuration, as shown in Figures 3-3 and 3-4.



Figure 3-3. Standard configuration.

In the example shown in Figure 3-3, two expansion modules are connected from two separate expansion ports on the ServSensor. In the example shown in Figure 3-4, the same two modules are connected to one expansion port in a daisychain configuration.





## 3.2 Setting up a Sensor (Standard Configuration)

This section describes the basic setup of a sensor in a standard configuration. It focuses on the temperature sensor; however, this basic setup process applies to all compatible sensors. If you require information on specific functions of a particular sensor, then download the manual for that sensor from our Web site or locate it on your product CD.

1. Plug the sensor into one of the RJ-45 "intelligent sensor ports" on the rear panel of the unit. In this example, we will use Port 1. See Figure 3-5.



Figure 3-5. Plug the temperature sensor into Port 1.

- 2. Enter the IP address of the unit (default, 192.168.0.100) into your browser.
- 3. Log in as the administrator using your administrator password (the default is "public"). The Summary page will appear as shown in Figure 3-6.

Summary setting         Board Name A         Type A*more findermation           Laryotd Setting         Board Name A         Type A*more findermation         Reading A*         Reading A*         Reading A*         State           Connex Setting         iii Internal RJ45         Board         Board         Internal RJ45         -         Internal RJ45         Internal RJ45         Internal RJ45		Sensors	Picture Log / Sound Log	102	Мар		Summary		
Layout Setting     Loard Name *     type *     Sensor Name *     Reading *     Name	Sensor Information				Setting	nary Se	Summa		
Cultines Setting         is Internal R.445         Board         Internal R.445         Board         Internal R.445         Control (0.000004)         Control (0.00004)         Control (0.	Board Name A 1/De A Sensor Name A Reading A Re	Type 🔺 🗸	Board Name A		etung	but Set	Layout		
Sensor Fatters         Internal Ku42         Doard         Internal Ku42         -           System of Fatters         Sensor status with ereloaded in Osecs         Sensor status with ereloaded in Osecs         -           0000001 06:19:23         Temperature Port 8 on Board 0A000004 is 24 %, status is Normal         0000001 06:19:23         -         -         -           0000001 06:19:23         Temperature Port 8 on Board 0A000004 is 24 %, status is Normal         0000001 06:19:23         -<	* Board UA00004 Board Board Board UA00004 -	Board Board 04000004				era se	Camera		
Syndog Filters         Sension status wild er readed in 03 secs           909/09/10/6119:48         Camera: Automatically stops when no video signal present for 3           009/09/10/6119:23         Temperature Procesity stops when no video signal present for 3           009/09/10/6119:23         Temperature Procesity stops when no video signal present for 3           009/09/10/6119:23         Temperature Procesity stops when no video signal present for 3           009/09/10/6119:23         Temperature Procesity stops when no video signal present for 3           009/09/10/6119:23         Temperature Procesity stops when no video signal present for 3           009/09/10/6119:23         Temperature Procesity stops with stormal           009/09/10/6117:28         Temperature Procesity stops with control           009/09/10/6117:28         Temperature Procesity stops with control           009/09/10/617:28         Temperature Procesity stops with control           <	the internal KJ45 Board Internal KJ45	Board	± Internal RJ45		itters	sor Fill	Senso		
System Log (18 messages)           0090901 06:19:48         Camera: Automatically stops when no video signal present for 3           0090901 06:19:23         Temperature Port 8 on Board 0A00004 is 29 °C, status is Normal           0090901 06:19:23         Temperature Port 8 on Board 0A00004 is 42 °C, status is Normal           0090901 06:19:23         Temperature Port 8 on Board 0A00004 is 42 °C, status is Normal           0090901 06:17:26         Temperature Port 8 on Roard 0A00004 is 42 °C, status is Normal           0090901 06:17:28         Temperature Port 8 on Roard 0A00004 is 42 °C, status is Normal           0090901 06:17:28         Security Port 5 status is Critical           0090901 06:17:28         Security Port 3 is 54 °K, status is Normal           0090901 06:17:28         Vater Detector Port 2 status is Critical           0090901 06:17:28         Vater Detector Port 2 status is Critical           0090901 06:17:28         Vater Detector Port 2 status is Critical	Sensors status will be reloaded in 03 secs		ilters	Syslog Filters					
1         0069001 06:15:48         Camerica: Automatically stops when no video signal present for 3           2         0069001 06:15:23         Temperature Port3 on Board A000004 is 28 °C, status is Normal           3         0069001 06:15:23         Temperature Port3 on Board A000004 is 48 °C, status is Normal           4         0069001 06:17:58         Temperature Port 61 50 28 °C, status is Normal           5         0069001 06:17:58         Security Port 5 status is Critical           6         0069001 06:17:58         Hamidity Port 5 is 54 %, status is Normal           7         0069001 06:17:58         Hamidity Port 5 in 54 %, status is Critical	System Log ( 18 messages )								
2         000000106:1523         Humidity Port 3 on Board 30000004 is 54 %, status is normal           3         00000106:1523         Humidity Port 3 on Board 30000004 is 54 %, status is Normal           4         00000106:1753         Temperature Port 61 23 %, status is Normal           5         00000106:1753         Security Port 5 status is Critical           6         00000106:1753         Humidity Port 3 in 54 %, status is Normal           7         00000106:1753         Water Observe Port 31 set 34	1 009/09/01 06:19:48 Camera: Automatically stops when no video signal present for 3	nera: Automatically stops when no vie	009/09/01 06:19:48 Ca	1					
4         009090106:17:58         Temperature Port 6 is 28 °C, status is Normal           5         009090106:17:58         Security Port 5 status is ICritical           6         009090106:17:58         Humidity Port 3 is 54 %, status is Normal           7         009090106:17:58         Water Detector Port 2 status is Critical	2 009/09/01 06:15:23 Humidity Port & on Board 0A00004 is 24 % status is Normal	nidity Port 8 on Board 0A000004 is 54	009/09/01 06:19:23 Hu	3					
5         009/09/01 06;17:56         Security Port 5 status is Critical           6         0009/09/01 06;17:56         Humidity Port 3 is 54 %, status is Iormal           7         009/09/01 06;17:58         Veter Detector Port 2 status is Critical	4 009/09/01 06:17:58 Temperature Port 6 is 28 °C. status is Normal	nperature Port 6 is 28 °C, status is No	009/09/01 06:17:58 Te	4					
6 0090901 06:17:58 Humidity Port 3 is 54 %, status is Normal 7 0090901 06:17:58 Water Detector Port 2 status is Critical	5 009/09/01 06:17:58 Security Port 5 status is Critical	curity Port 5 status is Critical	009/09/01 06:17:58 Se	5					
7 009/09/01 06:17:58 Water Detector Port 2 status is Critical	6 009/09/01 06:17:58 Humidity Port 3 is 54 %, status is Normal	6							
	7 009/09/01 06:17:58 Water Detector Port 2 status is Critical	7							
8 009/09/01 06:17:58 Dry Contact Port 1.8 status is Critical	8 009/09/01 06:17:58 Dry Contact Port 1.8 status is Critical	8							
9 1009/09/01 06:17:58 Dry Contact Port 1.7 status is Critical	9 009/09/01 06:17:58 Dry Contact Port 1.7 status is Critical	9							
10 009/09/01 06:17:58 Dry Contact Port 1.6 status is Critical System Log will be releaded in 07 each	009/09/01 06:17:58 Dry Contact Port 1.6 status is Critical System Loo will be releated in 07 sers	10							
aystem bay this te reveaue in or seca	Upsterr Log winder revauld in or seca								



The temperature sensor should be listed, along with its current reading and status.

4. Click on the temperature sensor's name (indicated in previous screen). The Sensors page appears.

									Admin
Location: System Location								Current System	m Time: 1/9/09 06:57:3
Summary Map	Picture	Log / Sound Log	Senso	ors	Notification	Settings	Applic	ations	Help
					Sensor Settin	gs			
Sensors Menu					Extended Port*				
Sensor Ports Extended Port Extended Port1 Extended Port2 Extended Port3 Extended Port3 Extended Port3	Extended Port	Board	0A000004	Here yo	u can see t	the expans	ion board s	elected	
• Extended Port4					Board 0A00000	4			
Camera Motion Detection	Hore you	can type	in a nam	a for					
No Camora Signal Detector	nere you	can type	in a nam		Board Name Board	d 0A000004			
Virtual Sensors		the mod	ule		Board Staus Conne	ected	This	shows bo	ard status
Ilala				В	ard Currently	nable			
This page shows the list of extended boards connected. Click on a board to setting.	This sho	ows online	or offlin	e status	Save Res	et			
		1	2	3	4	5	6	7	8
	Auto Sense	Auto Sense	Auto Sense	Auto Sense	Auto Sense	Auto Sense	Auto Sense	Auto Sense	Auto Sense
	Status		•				-		
	Online								•
		N/C	N/C	N/C	N/C	N/C	N/C	N/C	Temperature
					10010	2 12 22			_



NOTE: You can also access this page by clicking on the "Sensors" tab at the top of the page.

5. Extended ports are listed from 1–4 on the left side of the Sensor Menu page.





6. Click the Temperature Sensor icon (or another type of sensor icon).



Figure 3-9. Click on the sensor icon.

7. The page shown in Figure 3-10 appears.

						55. 	Admin
						C	
Summary Map	Picture Log / Sound Log	Sensors	Notification	Settings	Applica	tions Help	11:03:21
			Sensor Settin	ngs			
Sensors Menu			Extended Port	11			
Sensor Ports							
Extended Port							
Extended Port1							
Extended Port2		ard DA000003					
Extended Port3     Extended Port4	Extended Port1						
Camera Motion Detection			Board 0A0000	03			
Sound Detector	1	2 3	4	5	6	7 8	
No Camera Signal Detector	Auto Sense	Auto Sense Auto Sense	e Auto Sense	Auto Sense	Auto Sense	Auto Sense	ense
Virtual Sensors	Status 🔴	• •	•	•	٠	• •	
Help	Online	• •	٠	•	•	• •	
This page shows the list of extended boards	[TITETOT ]	(TETETTOT)	(TITUTION)	(TITUTION)	(TITUTIOT)		
connected. Click on a board to setting.							4
Helpful Suggestion	NIC	N/C N/C	N/C	N/C	N/C	N/C Tempera	ature
Rearm							
One way to reduce the amount of false warnings when temperatures are frequently fluctualing, is to set the "Rearm" feature here. This is similar to the "Continuous Time" feature as it will filter out or not allow additional alerts to be sent if the temperature fluctuates within the degree this has been set to		_	Sensor Name Temperate	ure Port 8 30 °C 30 °C 30 40 High Critical High Warning	-		
Continuous Time for Sensor		Low	Low High	High			
One way to elimante false warnings in an		Critical	Warning Warni	ing Critical			
time in the continuous time to report feature		10	20 30	40			
here							
		(	Current Reading 30.0 °C				
			Status High Wa	ming			
		S	ensor Currently	le			
		Advance	d Mode >>				
			Save Re:	set			
			Set Thermostat O	Inline			
Isensors status will be reloaded in 08 secs							

Figure 3-10. Sensor Settings page for Temperature Sensor on Port 1.

As with the ServSensor V4E, the procedure for changing sensor values remains the same. For more information on sensor settings, refer to the ServSensor (EME134A) manual or individual sensor manual.

## 3.3 Setting up a Sensor (Daisychained Configuration)

This section describes the basic setup of a sensor in a daisychained configuration. It focuses on the temperature sensor; however, this basic setup process applies to all compatible sensors. If you require information on specific functions of a particular sensor, then download the manual for that sensor from our Web site, or locate it on your product CD.

Connect the two modules together by following the instructions below:

1. Insert a straight-through CAT5 cable into the "E-out" port.



Figure 3-11. E-out port.

2. Insert the other end of the CAT5 cable into the "E-in" port.



Figure 3-12. E-in port.

NOTE: Make sure you also have a 7.5-volt power supply connected.

3. When the unit is connected, the LEDs will enter the boot-up sequence indicating that the expansion module (EME1X8) is communicating with your ServSensor V4E (EME134A).



4. Plug a sensor into one of the RJ-45 "intelligent sensor ports" on the rear panel of the unit. In this example, we will use Port 1.

Figure 3-13. Plug sensor into Port 1.

5. After the unit is connected, access your Web interface, click on the desired IP address and log in, and navigate to the summary page. Two boards will be displayed within the sensor information window as shown in Figure 3-14.

Board Name 🔺	Type ▲ 🔻	Sensor Name ▲ ▼	Reading A 🔻	Status A V
Board 0A000003	Board	Board 0A000003	-	Warning
Board 0B000004	Board	Board 0B000004		Connected
Internal RJ45	Board	Internal RJ45		Warning
	Sen	sors status will be reloaded in 10 secs		

Figure 3-14. Sensor information window.

6. Click on the lower of the two boards and the sensors page will appear.

**NOTE:** You can also access this page by clicking on the "Sensors" tab at the top of the summary page.

System Name - Windows Internet Explorer							. IF
G · http://10.1.5.206/sensors.php?sens	sorMenu=08board_id=1845493808board_index=	68showingPage=-18PHP5ESSID=913c1b9	d701848de6f34f58598577e01		[★] [★]	Live Search	٩
👻 🔹	Η				9	• 🔂 • 🖶 • 🕞 Pag	ge + 🍘 Tools + Admin
Location: System Location Summary Map	Picture Log / Sound Log	Sensors	Notification	Settings	Applications	Current System Time: 17	7/9/09 12:18:36 Ielp
Sensors Menu			Extended Port1	y»			
Sensor Ports Extended Port Extended Port1 Extended Port2 Extended Port3 Extended Port4	Extended Port1		HB000004	- Secondary o	laisy chained	expansion b	oard
Camera Motion Detection			Board 0B00000	1			
Sound Detector No Camera Signal Detector Virtual Sensors Help	Primary expansio	n board	Board Name Board Board Staus Conne Board Currently	d 0B000004 Acted			
This page shows the list of extended boards connected. Click on a board to setting.	Daisy chained boa	rd details	Save Res	et			
	1	2 3	4	5	6	7	8
	Auto Sense I Auto Sense Status Online Online Online	Auto Sense Auto Sen Auto Sense Auto Sen Auto Sense Auto Sen Auto Sense Auto Sense Auto Sense Auto Sense Au	Auto Sense	Auto Sense	Auto Sense	Auto Sense	Auto Sense
			Sensors attache	ed to the seco	ndary expansi	ion board	

Figure 3-15. Sensor Settings page.

7. Click on any available sensor. The settings for that particular sensor will appear as shown in Figure 3-16.



Figure 3-16. Temperature sensor settings icon.

8. After you click on the chosen sensor port, the screen shown in Figure 3-17 will appear.

center System Location Current Resources Internet Procession Sensor Sens								Admin
Current System Ture: 17:809 12:32:26         Summary       Map       Picture Log / Sound Log       Sensors       Notification       Settings       Applications       Notification       Settings       Sensor Settings         Sensor Settings         Sensor Settings         Setting Seting Setting Seting Seting Seting Setting Setting Setting Setting Se								
Summary     Map     Picture Log / Sound Log     Sensors     Notification     Settings     Applications     Map       Sensor Monu     Extended Port1     Extended Port1     Extended Port1     Extended Port1       • Extended Port1     Extended Port1     Extended Port1     Extended Port1       • Extended Port2     Extended Port1     Extended Port1       • Extended Port1     Extended Port1     Extended Port1       • Extended Port1     Extended Port1     Extended Port1       • Extended Port1     Extended Port1     Extended Port1       • Extended Port2     E	Location: System Location						Curr	ent System Time: 17/9/09 12:34:26
Sensor Settings Extended Port Extended Port Extended Port Extended Port Rearm re yo b refue for sport Rearry re	Summary Map	Picture Log / Sound Log	Sensors	Notification	<u> </u>	Settings	Applications	Help
Sensor Ratu       Extended Port1         Extended Port2       Extended Port1         Extended Port2       Extended Port1         Extended Port2       Extended Port1         Extended Port2       Extended Port2         Extended Port3       Extended Port3         Extended Port4       Extended Port4         Rearm       Sensor Name         Interversion Forduce the amount of talise annings when temperatures are frequently uculation, also table the "Rearm feature end"         Interversion Forduce the amount of talise annings when temperature end feature end				Sensor	Settings			
Standard Dort • Etandard Port1 • Etandard Port2 • Etandard Port	Sensors Menu			Extend	Jed Port1			
Standad Dod Extended Port3	Sensor Ports							
Lettended Port2     Extended Port3     Extended Port3     Extended Port4     Extende	Extended Port			-				
Litered Port I     Extended Port I     Ex	Extended Port1	<u> </u>						
	Extended Port2	Bog	ard 0A000003 Board 0	B000004				
	Extended Port3	Extended Port1						
Rearm       Sensor Name       Temporature Port 8         Variable as into the mount of this is a similar to the "Continuous Time to and the for sort of the live variable as within the degree this has been set be       30 °C         Continuous Time for Sensor       Low Critical       0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.	Extended Port4							
Inderwähr Product in einder antibuit unset ubuikange is is osten in Beaum feature texer. The is similar to the "Continuous Time" seems frage texer. The is similar to the "Continuous Time" seems frage didicional alerts to be sent if the temperature ubuikases within the degree this has been set 2 Continuous Time for Sensor Inter way to elimate false varings in an instable temperature environment, is to add me in the continuous time to report feature are Current Reading 30.0 ° C Satures I High Warning Sensor Currenty I Online Advanced Ilide >> Sarver Readel Sarver Readel	Rearm							
Low Critical 10, 20, 30, 40, High Critical Low Critical 10, 20, 30, 40, High Critical Low Critical 4, 0, 20, 30, 40, High Critical Low Warming High Warming High Warming Critical 10, 20, 20, 20, 40, High Critical Low Critical 10, 20, 30, 40, High Critical Low Warming Low High Warming Critical 2, 20, 20, 40, High Critical Low Critical 2, 20, 20, 40, High Critical 10, 20, 20, 20, 40, High Warming Critical 2, 20, 20, 40, High Critical 10, 20, 20, 20, 20, 20, 40, High Critical 10, 20, 20, 20, 20, 40, High Critical 10, 20, 20, 20, 40, High Critical 10, 20, 20, 40, High Critical 10, 20, 20, 20, 20, 40, High Critical 10, 20, 20, 20, 20, 40, High Critical 10, 20, 20, 20, 40, High Critical 10, 20, 20, 40, 40, 40, 40, 40, 40, 40, 40, 40, 4	warnings when temperatures are frequently			Sensor Name Ter	mperature Port 8	8		
enter start start information of the output	fluctuating, is to set the "Rearm" feature							
ddificial alefs to be sent if the tamperature o Continuous Time for Sensor Ine way to elimate file warning in an instable the many carrier of the automatic to add in in the continuous time for seport feature are Current Reading 30.0 ° C Satus High Warning Sensor Currenty © Online Advanced Blode >> Save Reset	feature as it will filter out, or not allow				30 °C			
Continuent line for sensor New type terminant line for sensor New type terminant line sensor sensor netable for manufacture area area Current Reading 30 - C Sensor Currently Sensor Curr	additional alerts to be sent if the temperature							
Continuous Time for Sensor         Low         Low         Continuous Time for Sensor           Data Way Bellmante faise variantings in an infrazor trade way and the son son trade to report feature area         Low         Low         High Marring         High High           10         20         30         40         Critical         Contract Reading         30.0 ° C           Sensor Currently         Ensor Currently         Continue         Sensor Currently         Continue           Sensor Currently         Sensor Currently         Continue         Advanced Blode >>         Sensor Currently	to			Low Critical	10 20 30	40 High Critical		
Continuous Time for Sensor     Low     Low     High     High       In way to elimate file warming in an instable therwarm is to add me in the continuous time to report feature and interval time to report the time to				Low V	Narning High	Warning		
One way for way for way for way     Critical     Varming     Varming     Critical       Interview     10     20     30     40    Current Reading 30.0 ° C Status High Warming Sensor Currenty Current Reading Sensor Currenty Save Reset	Continuous Time for Sensor		Low	Low	High	High		
me in he continuous time to report feature are Current Reading 30.0 ° C Status High Warning Sensor Currenty Contine Advanced filode >> Save Reset	One way to elimante false warnings in an unstable temperature ennvironment is to add		Critical	Warning	Warning	Critical		
Adranced Mode >>  Advanced Mode >>  Save Reset	time in the continuous time to report feature		10	20	30	40		
Status High Warning Sensor Currenty Contine Advanced Node >> Save Reset	nere			Current Deading 20	010			
Satus Transvermag Sensor Currenty Contine Advanced Hode >> Save Reset				Current Reading 300	.0 * C			
Sensor Currenty Currenty Advanced Hode >> Save Reset				status n	ngn warning			
Advanced Mode >> Save Reset			S	Sensor Currently	Online			
Advanced Node >> Save Reset								
Save Reset			Advance	ed Mode >>				
				Save	Reset			
Set Thermostat Online				Set Therm	nostat Online			

Figure 3-17. Sensor Settings page for Temperature Sensor on Port 1.

## 4. Notifications

Set up a notification to define what to do when the sensor gives a reading beyond your previously set thresholds. This allows you to determine how you will be notified that a sensor's reading has reached the specified parameters (high warning, critical, etc.).

## 4.1 Adding a Notification

- 1. Login as the administrator.
- 2. Click the "Notification" tab.
- 3. Click the "Notification Wizard." Figure 4-1 appears.

				Click notifie	cation tab	
Location: System Location			-		Current System Ti	ime: 26/7/09 16:22:3
Summary Map	Picture Log / Sound Log	Sensors	Notification	Settings	Applications	Help
			Link Sensor To A	ction		
Notification Menu						
Begin Notification Wizard	Link Sensor To Action	Escalation				
Action	Board Name	Sensor Name	Ac	tion on Status	Actio	n Name
Link Sensor To Action	-	-		-	Heno	-
Options						
View Notification Log		Create	Edit Create Es	scalation Remo	ve	
Notification Analyzer						
Help						
This is an overview of all configured Sensor Action Links. From here you may create, edit and remove Sensor Action Links Select your desired Sensor Action Link(s) before making a choice. Each line should be descriptive. E.g. If Temperature in Store room Is High Critical Then E-mail Store Room Manager.	Click here to beg up a notifica	in setting ation				
Done						Trusted sites
🛃 start 🔰 🚳 Inbox for da	ni 🛛 🚈 System Name 🔂	eleaning raw 🛛 🕼	iTunes 🛛 🖬 s	ecurity_prob	Adobe Photos 🙎	🝷 🔇 🛂 🌒 11:2:

Figure 4-1. Notification Wizard tab.

4. The notification wizard page (see Figure 4-2) is displayed.

								Admin 🧖
Location: System Location							Current Syste	em Time: 26/7/09 16:29:11
Summary Ma	p Pi	ture Log / Sound Log	Sensors	Noti	fication	Settings	Application	s Help
				Cr	eate Action	n		
Notification Menu		The Notificat	ion Wizard will quido y	ou eton by	cton through	the process of s	alcting a concor cro	atina
Begin Notification Wizard	n Notification Wizard an action and defining the criteria under which the Notification will be sent.					ercury a sensor, crea	ating	
Action								
<ul> <li>Add Action</li> </ul>			Please select an Acti	on Type	SNMP Tra	p	× .	
Link Sensor To Action					Email		Next >	
Options	2				MMS			
View Notification Log					Relay Alarm Sou	nd	and the second se	
Notification Analyzer					Speech	nu		
Help	Help Drop down menu with various				Picture Log			
Please select an Action Type from the pull down box. Later your action will be linked to a sensor and status.	an Action pull down action will sensor and			Telephone Custom So Fax Sound Log Siren Wake Up / Windows / Skype Call	Call cript Shutdown Alert /SMS			
						Click	"Next" aft notificatio	er selecting on type
ê								Trusted sites
🛃 start 🧉 🗟 Inbox fo	· 👌 Sy	stem N 🦳 🚞 eleanin	ng r 🛛 👘 iTunes	🖬 s	ecurity_p	Ps Adobe Ph	Skype™	😰 🍕 💀 🛂 🌒 11:29 AM

Figure 4-2. Notification Wizard page.

**NOTE:** We will now show a sample notification. To learn what the other types of notifications do, refer to the separate notification manuals on your product CD.

## 4.2 SNMP Trap

Set up a notification via SNMP trap, so that when your sensor reaches a certain threshold it will send a notification to your SNMP server.

- 1. Log in as the administrator.
- 2. Click the "Notifications" tab.
- 3. Choose "Notifications Wizard."
- 4. Select "SNMP Trap." The screen shown in Figure 4-3 appears.

Action Name	SNMP Trap 1	Enter name for your
Trap Version	⊙ v1 ○ v2c ○ v3	Siving notification
SNMP Trap send port( default is : 162 )	162	= Enter the IP address
Destination Address	192.168.0.XXX	of your SNMP trap
Community	public	
Enter community	Add Trap Destination	
name of trap		Cancel Next

Figure 4-3. SNMP Trap screen.

- 5. Fill in the following information:
- Enter a name for the SNMP notification.
- Enter the IP address of the SNMP trap.
- Enter the community name of the SNMP trap.
- 6. Click the "Add Trap Destination" button.
- 7. Input another trap or click on the "Next" button. The screen shown in Figure 4-4 appears.



Figure 4-4. SNMP trap notification screen.

8. Enter the Maximum Times to Resend and the Resend Intervals (secs). These parameters set the maximum number of times to send the trap notification and the time interval between each notification.

- 9. Click on "Next" and the following screens will appear. On these screens you can select the parameters for when to send the SNMP trap notification.
- 10. Select the expansion board and then the sensor.

Link Sensor To Action	Escalation	Sensor	Sensor Filter
Select expansior	your 1 board	Select your sensor	<ul> <li>✓ Temperature</li> <li>✓ Motion</li> <li>✓ Humidity</li> <li>✓ Dual Temperature</li> </ul>
		Cancel Next>> Click "	Next"

Figure 4-5. Selecting the expansion board and sensor.

11. Select the status, and then the action.

Link Sensor To Action Escalation		Action	Action Filter
High Critical Normal Low Youring Low Critical Sensor Error Select "High Critical"		Select the name of trap you just creat	v SNMP Trap v Email the ted
	Cancel	<< Back Finish Advanced Mode >>	Click "Finish"

Figure 4-6. Selecting setting and trap name.

**NOTE:** In the example above, the SNMP trap is bound to the temperature sensor that's connected on Port 1. The trap will be sent when the sensor reads a "High Critical" and we bind this to the SNMP trap we just created and named "SNMP Trap 1."

## ServSensor EXP 8

12. Once we have created the parameters for the SNMP trap, we need to make it active. To do this, go back to the "Notification" tab. It should look like the screen shown in Figure 4-7.

						Admin Log Off
Location: System Location					Current System Til	me: 31/7/09 16:47:39
Summary Map	Picture Log / Sound Log	Sensors	Notification	Settings	Applications	Help
			Link Sensor To A	tion		
Notification Menu						
Begin Notification Wizard	Link Sensor To Action	Escalation				
Action	Board Name	Sensor Name	Acti	on on Status	Actio	n Name
Link Sensor To Action	-	-		-		-
Options						
View Notification Log		Create	Edit Create Es	calation Remo	ove	
Notification Analyzer						
Help						
This is an overview of all configured Sensor Action Links. From here you may create, edit and remove Sensor Action Links.Select your desired Sensor Action Link(s) before making a choice. Each line should be descriptive. E.g. If Termersture in Store room	Clic	k "Create"				
Is High Critical Then E-mail Store Room Manager.						

Figure 4-7. Notification tab.

13. Select the sensor and SNMP trap parameters as before. Figure 4-8 appears. Select the expansion board, then select the sensor. Click "Next."

Link Sensor To Action Roar Board 0A000003	Escalation	Sensor Temperature Port 8	Sensor Filter
Select y expansion	your board	Select your sensor	<ul> <li>✓ Motion</li> <li>✓ Humidity</li> <li>✓ Dual Temperature</li> </ul>
		Cancel Next >> Click "	Next"

Figure 4-8. Select the expansion board, then select the sensor.

Figure 4-9 appears. Select the status and action, then click "Finish."

Link Sensor To Action	Escalation		Action	Action Filter
High Critical	ct itical"		Select the name of trap you just creat	SNMP Trap v Email the ed
	Can	cel	< Back Finish Advanced Mode >>	Click "Finish"

Figure 4-9. Select "High Critical," then select the trap name.

As shown in Figure 4-10, the SNMP trap has been added to the Notification page.

Board Name	Sensor Name	Action on Status	Action Name
internal RJ45	Temperature Port 1	High Critical	SNMP Trap 1
	Create	Create Escalation Remove	

Figure 4-10. Notification page.

**NOTE:** To remove this trap and make it inactive, highlight the notification and click remove.

NOTE: You can repeat this process to set up multiple SNMP traps for different sensors or for multiple SNMP servers.

## Black Box Tech Support: FREE! Live. 24/7.



Great tech support is just 20 seconds away at 724-746-5500 or blackbox.com.



#### About Black Box

Black Box Network Services is your source for more than 118,000 networking and infrastructure products. You'll find everything from cabinets and racks and power and surge protection products to media converters and Ethernet switches all supported by free, live 24/7 Tech support available in 20 seconds or less.

© Copyright 2010. All rights reserved.